



THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

TERMS—The "AMERICAN FARMER" is published every Wednesday at \$2.50 per ann., in advance, or \$3 if not paid within 6 months. 5 copies for one year for \$10. ADVERTISEMENTS not exceeding 16 lines inserted three times for \$1, and 25 cents for each additional insertion—larger ones in proportion. Communications and letters to be directed to SAMUEL SANDS, publisher, corner of Baltimore & North sts.

THE FARMER'S LAND MEASURER.—We are indebted to the author for a copy of a little work bearing this title, which, as well as we can judge of its merits by a very slight examination of its pages, is well calculated to find its way to the library of every intelligent farmer. As we shall notice it more fully in our next we will for the present content ourselves with the remark, that its rules and tables for the measurement of land, and apportionment of manure, are as ample as they are comprehensive and useful.

FINE SHEEP.—The last number of the Farmer's Cabinet contains a portrait of *Major*, a wether of the Bakewell breed, raised by Major *Reynolds*, of Delaware. He was two years old when slaughtered; his live weight 251 lbs.; weight of carcass, the 4 qrs. 147 lbs., cutting 4½ inches thick of fat on the ribs, and furnishing a splendid saddle of mutton weighing 78 lbs. which was purchased by *B. Tevis, Esq.*, and presented to the Post Master General, *Chas. A. Wickliffe*, by whom it was presented to the President of the U. S.

In the same paper we find an account of thirteen other Bakewells, which were raised by our old friend *John Barney*, at his farm near Port Penn, Delaware. These fine sheep were slaughtered on the 26th ult., and sold in the Philadelphia market. The gross weight of the thirteen was 2335 lbs.; dead weight 1298 lbs.; the live weight of the largest 231 lbs.; dead weight 133½ lbs.; the live weight of the smallest 153 lbs.; dead weight 109½ lbs. The mutton when on the stalls, says the account, was decidedly the fattest ever offered for sale in that market.

Mr. Barney has been long known to the agricultural public as among the most successful graziers of our country, and from the weight and quality of the present lot, he appears, like wine, to improve by age. And as his successful career, and great experience, entitle his opinions to great consideration, we will extract the concluding part of his notice of his sheep.

He says—"A word in season to the stock breeder may not be amiss on this occasion. My judgment from many years experience, corresponds with that of *Genl. Emory*: 'keep your breeds entirely distinct, both cattle, sheep, &c. —Bring in your crosses from distant families of the same race, and do not give them even one cross of another breed, unless you have a definite object—some specific point of form or quality which you wish to correct or improve, and then, you must be sure that you do not introduce at the same time another defective point, and pursue the object with undeviating steadiness.' "My sheep's ages were from 1 to 2 and 4 years—the two year old nearly equalled in weight and quality of meat those of 4 years old."

"It is well known that the great Bakewell's object and aim was to raise a breed of sheep which should come to perfection in the shortest given time: this might well be termed time and money saved, and this is the superior quality of the true-bred Bakewell Sheep. By referring to the weight of *Mr. Bakewell's* sheep in his day, we find they averaged from 22 to 30 lbs. per quarter, at the age of 2 years; this has frequently been accomplished by myself within the last thirty years, during which I have been paying strict attention to this valuable race of sheep; my object is still to keep them as pure in blood as possible, being fully convinced there is no advantage to be derived from crossing with other breeds. JOHN BARNEY."

With two such breeders, little *Delaware* will be found, by her confederate sisters, as hard to beat in good uns, as were her patriot soldiers in the days of the revolution.

PLOUGHING IN GREEN CROPS FOR MANURE.

We have always been the advocate of ploughing in suitable green crops as a cheap and efficient means of resuscitating worn-out lands; and with a view of enforcing the propriety of making the experiment, we have often brought the subject before our readers. In doing so, we have been actuated by the two-fold desire of presenting to their consideration what we considered the most available means of counteracting the effects of the ravages which an exhausting course of culture had made upon their respective soils, and of thereby enabling them, at a small expense, to place their possessions in a condition of profitable yield. But while we have ever been the advocates of ploughing in green crops, as a means of improvement, we have as sedulously endeavored to enforce the necessity of the use of lime, marl or ashes, in connection with that process, because we are fully convinced that no system of melioration, which does not combine lime, in some of its forms, with it, can, from the nature of things, be permanent in its effects. We are aware that no single substance, be that substance whatsoever it may, affords the food of plants. One plant may delight more in one substance than another, but still each and all, like the human appetite, require for their gratification and healthful indulgence, a change, or variety. If this were not so, we should not discover by analysis, that the organic matter of plants were composed of various substances, and that a portion of these had been evidently abstracted from the atmosphere. The theory of *Leibig* would inculcate the belief that the plants derive their sole sustenance from atmospheric sources; but deferring as we do to the ability with which he has treated every subject embraced by him in his admirable work, and as ingeniously as he supports this particular opinion, we are compelled by a sense of candor to declare, that we dissent from it. Our opinion is, that the pabulum of plants is supplied from earth, air, and water, and that a favorable combination of condition, in each, is essential to secure their growth in their greatest vigor, as well as the most perfect maturation of their roots and seed. If the air alone were the source of supply, how could we detect in the ashes of vegetables, by the aid of chemical analysis, the presence of many of those mineral substances whose specific gravity forbid the idea of their being held in aerial solution, and thus subject to absorption by means of the leaves of plants? We freely

admit that a very large portion of the nutriment of plants is derived from the atmosphere, and hence in our opinion, the great value to be derived from the turning in of those green crops, the constitution of whose leaves, are best adapted to the absorption, and appropriation to themselves, of aerial nourishment, as, for instance, clover, lucerne, buckwheat, and other plants of the broad leaved genus, because, by their inhumation more is returned to the earth, than is extracted therefrom in the process of their growth, and to the amount of the excess, as a necessary consequence, must the soil be improved.

Experience has long since taught us, that, by the ploughing in of clover-leys, soils have been greatly improved, not only in texture, but in their capacity for production. This fact, surely, then, goes to confirm the truth of the position, that a considerable portion of vegetable nutriment is derived from the atmosphere, and whether that be owing to the attraction of carbon, ammonia, or any other gaseous substance, is by no means material. It is sufficient for us to be convinced of the fact, and to be able to recognise, in the improved condition of the soil, the salutary effect produced, to induce us at once to admit the truth of this proposition, that if the growing carpet of clover had not appropriated to itself from the air and rain, more pabulum than it had extracted from the earth, that the benefits which our senses tell us had resulted, could not have been produced. It may then, be assumed as a proposition which cannot be controverted, that all decayed and decaying vegetable substances, contain within them, constituents competent to the production and sustenance of living bodies. This fact being admitted, it follows as a natural consequence, that it is only necessary to restore to the earth the bodies, or rather a portion of them, which have been grown thereon, and to add thereto a minute quantity of calcareous matter, to ensure fertility, provided a judicious system of rotation of crops be pursued.

If we yield assent to this course of reasoning, the next inquiry is, what is the most appropriate crop, under all circumstances, to be turned in?

And before we settle this point, it will be proper to premise, that we have acted upon the supposition, that the ground in which the green crop is to be ploughed in, has been exhausted of its principles of fertility. Upon all such soils then, we maintain that *Buckwheat* is the most appropriate plant to sow for such purpose; first, because, from the construction and size of its leaves, it is happily adapted to extract from the atmosphere and rains, as well as to retain, those salts and gases which so largely contribute to the support of vegetable life; and, secondly, because from its habits and nature, it will thrive better upon poor soils, and in consequence, give to the earth a larger body of vegetable matter, than almost any other plant. *Clover*, would, doubtless, owing to its long tap-root, be preferable; but this vegetable we know requires to be grown on soils already fructified, and is, in fact, the best evidence a farmer can desire, of the improved condition of his land; as whenever it yields a luxuriant growth of this grass, he is assured that it is competent to the production of any crop which he may commit to its nurture.

In all cases, however, where the land on which it may be contemplated to grow a crop of buckwheat to plough in, may be very poor, we would advise that a bushel of plaster, to the acre, be spread thereon at the time of seeding. This, by its power to absorb ammonia from the earth and atmosphere, and capacity of assimilation, will enable the husbandman to turn in a luxuriant growth, and thus secure the object he has in view.

Buckwheat, too, from its luxuriant growth, has a tendency to spread, and the shade it affords, is well known to be one of the best cleansers of land, and scarcely fails to eradicate numerous noxious weeds from the soil; and if its growth and inhumation effected no other good than this, it alone would be worth all the trouble and expense attendant upon the operation. But such is not the fact, as it would return to the earth the best of materials for the manufacture of food for succeeding crops of vegetables. In support of this assertion, we will quote a paragraph from professor Dana, a gentleman whose contributions to agricultural knowledge, within the last few years, place him among the most enlightened of the authors who have written upon the subject of chemistry and its application to agriculture. He says:

"The most barren sand would be made fertile by living plants. Sand containing no appreciable quantity of *geine*,* may yet from its origin from sedimentary rocks contain carbon. Water it, and grow it in plants. Let these perish. They return to the sand, not only organic matter, the source of *geine* for a new crop, but various salts, of whose previous existence in the same it required the most delicate chemistry to detect the traces. The living plant is a consummate analyst. This is the process nature employs. Mr. Keely, acting on this principle, and following out and assisting the natural mode, has opened the whole soul of raising crops. The memorable experiment of the Haverhill rye-field, ought to be engraved on the thresholds and lintels of every farm house in the country. It teaches us that *salts*, so important in agriculture, are within the reach of every farmer. Every farmer has a lime-quarry on his own land."

In order that the reader may understand the force of these allusions to the Haverhill rye field experiment, and get a comprehensive idea of the value of turning in green crops, we will give the paper detailing Mr. Keely's experiment, as we deem it highly necessary, and we feel particularly gratified, that we have the document in our possession, inasmuch as it goes fully to sustain our views, and may, as we trust it will, tend to encourage our brethren to give the efficacy of turning in green crops a full, fair, and impartial trial.

Among the proceedings of the Essex Co. Mass. Agricultural Society for the year 1832, we find the following communication:

On Cultivation of Rye—John Keely's statement.

To the Trustees of Essex Agricultural Society:

Gentlemen: Having for some years past been more than commonly successful in raising large crops of winter rye by a process of cultivation which I believe is entirely new, I have been induced by the suggestion of some gentlemen whose judgment I very much respect, to submit for your consideration a statement of the mode of culture with the produce. And that the success of the experiment this season, may not appear to be altogether accidental, it will perhaps be as well to communicate the result of the process for the three or four previous years.

The land on which the experiment has been conducted is situated on the Merrimack, about a mile and a half east of Haverhill bridge, and came into possession of my father in 1827. The soil is a sand, approaching to a loam as it recedes from the river. It is altogether too light for grass. The crops we find most profitable to cultivate on it are winter rye, indian corn, potatoes, and to some extent turnips. Oats might probably be raised to advantage were it not that the land is completely filled with the weed commonly called *charlock*, which renders it entirely unfit for any spring crops, excepting such as can be hoed. The crops of rye, on the neighboring soil of the same nature,

vary I believe from seven or eight, to twelve or thirteen bushels per acre, according to the cultivation and their approximation to the river. We usually raise on the land from 13 to 30 bushels of indian corn per acre. Potatoes are very good in quality, but the quantity is quite small, not sufficient to be profitable, were it not that the land is very easily cultivated.

In the summer of 1827, we sowed 3 bushels of winter rye near the river, on about 2 acres of land, which produced 28 bushels.

In 1828, we sowed 4 bushels on 4 acres of land running the whole extent of the plain from the river. This piece was sowed in the spring with oats; but they were completely smothered with charlock, and about the middle of June the whole crop was mowed to prevent the charlock seeding. By about the middle of August, a second crop of charlock having covered the land, it was ploughed very carefully, in order to completely bury the charlock; and then suffered to remain until the 15th of Sept. when we began sowing the rye in the following manner. A strip of land about 12 yards wide was ploughed very evenly to prevent deep gutters between the furrows, and the seed immediately sown upon the furrow and harrowed in—Then another strip of the same width, and so on until the whole was finished. We found the oat stubble and charlock entirely rotted, and the land appeared as if it had been well manured, though none had been applied to this part, since it had been in our possession. The rye sprung very quick and very vigorously, having evidently derived great benefit from being sown and sprouted before the moisture supplied by the decaying vegetable matter in the soil had evaporated to any considerable extent. This crop produced 133 bushels.

In 1829, the charlock was suffered to grow on the land appropriated to rye, until it had attained its growth and was in full blossom. The land was then ploughed very carefully and the charlock completely covered in. In a short time a second crop appeared more vigorous than the first. This was allowed to gain its growth, and then ploughed in as before. A third crop soon appeared, which of course was destroyed when the land was again ploughed for sowing about the middle of September. This piece of land was a parallel strip running from the river, and containing 2 acres. Two bushels of rye were sowed; the crop presented a remarkably fine appearance and yielded 74½ bushels.

In 1830, the land appropriated to rye included nearly all the lighter parts of the soil, and owing to a pressure of business was not attended to as we could have wished. It was ploughed in the early part of the summer. But harrowing to destroy the weeds was substituted for the second ploughing. This and the usual blight which affected all the grain in this part of the country, led us to anticipate a smaller crop. It yielded however 15 bushels to the acre.

The land on which the crop of rye was raised the present season, had for the three or four previous years been planted with indian corn. And owing to the extent of our tillage land, we have not been able to apply more than 4 or 5 loads of manure to the acre this season. The charlock was suffered to attain its growth as usual; and on the 18th and 19th of June it was carefully ploughed in. The second crop was ploughed in on the 6th and 7th August. On the 14th and 15th Sept. it was sowed in the usual manner, namely: a small strip of land was ploughed and the seed sown immediately upon the furrow and then harrowed in. Then another strip of land was ploughed, and so until the whole was completed. One bushel per acre was sowed as usual. We have never prepared our seed in any manner, but directed our attention solely to the preparation of the land; and to this we attribute our success. Owing to the unusual severity of the winter the crop was considerably winter killed; but recovered very soon in the spring, excepting in the midfurrows. There as the land lies very level, the water settled, and so completely destroyed the rye that they continued bare the whole season. This would of course cause some diminution in the crop; perhaps a bushel or two. The rye was reaped at the usual season, and as the weather was favorable, immediately put into the barn. The land contained 1 acre and 13 rods, and yielded 46½ bushels; a remarkably fine sample.

In entering a claim for your premium, I would ask your attention particularly to the process of cultivation. It is I believe entirely new, and capable of general application.

Sowing the seed immediately after the plough we consider very advantageous to the crop. The ground being

then moist, causes the seed to spring immediately, and gives a forwardness and vigor to the plants which they ever after retain.

The process of ploughing in three crops of weeds before the seed is sown, very much enriches the soil. It would be altogether unnecessary to attempt to refute the notion, that by such a process nothing more is applied to the soil, than was before derived from it. If one could not discover by the light which chemistry has shed upon the subject of agriculture, sufficient reasons for the contrary conclusion, observation, one would think, would be sufficient to convince any intelligent man of the fact.

And here I would suggest, that I do not consider the experiment as we have conducted it, quite complete. To render it more so, in the first place, in ploughing in the weeds, I would not turn a furrow after the dew had evaporated. I have no doubt that a large portion of that fertilizing quality in the soil, which during the summer months is continually exhaled from the earth, is by the dew brought again within our reach, and it would be wise to avail ourselves of the opportunity of again burying it in the soil. And in the second place, I would by all means use a heavy roller after such ploughing. It would fill all the cavities left by the plough, and by pressing the soil more closely to the weeds, at once hasten their decomposition, and very much retard the evaporation of the soil.

But the land is not only very much enriched by the process. There is, I conceive, no method by which it can be so effectually cleaned. Three times during this season, a fresh surface is presented to the atmosphere, and each time, as the decaying vegetable matter increases in the soil, so is the exciting cause augmented to make a more vigorous effort. We have in this manner gone over nearly all our land which is infested with charlock, and the diminution of the weeds is quite sufficient to warrant the expectation, that in a few years it may be comparatively eradicated. Very respectfully,

Haverhill, Sept. 22, 1832.

JOHN KEELY.

We deem this paper of Mr. Keely, of great importance, as going conclusively to establish the advantages resulting from the ploughing in of green crops, and backed as it is by the emphatic endorsement of Prof. Dana, it is entitled to the profoundest consideration of the agricultural community, and under that belief we commend it to their attention.

The process of ploughing in buckwheat, should be preceded by rolling; and before the plough is set to work, we would advise, that a few bushels of lime, say five to the acre, be sown on the buckwheat. By beginning in early spring, three crops of buckwheat might be grown to the blossoming state, and buried in time for sowing either rye, or wheat, and we have no doubt that, by pursuing the course indicated by us, soils measurably worn out might be made to yield good crops of all kinds, and remain in good heart for years—and we would ask, by what process could land be manured at less expense? If there be any we know it not.

From Leibig's Organic Chemistry.

OF THE INTERCHANGE OF CROPS, AND OF MANURE.

(Continued.)

The excrements of a carnivorous animal contain no constituents fitted for the nourishment of another of the same species; but it is possible that an herbivorous animal, a fish, or a fowl, might find in them undigested matters, capable of being digested in their organism, from the very circumstance of their organs of digestion having a different structure. This is the only sense in which we can conceive that the excrements of one animal could yield matter adapted for the nutrition of another.

A number of substances contained in the food of animals pass through their alimentary organs without change, and are expelled from the system, these are excrements but not excretions. Now a part of such excrementitious matter might be assimilated in passing through the digestive apparatus of another animal. The organs of secretion form combinations of which only the elements were contained in the food. The production of these new compounds is a consequence of the changes which the food undergoes in becoming chyle and chyme, and of the further transformations to which these are subjected by entering into the composition of the organism. These matters, likewise, are eliminated in the excrements, which must therefore consist of two different kinds of substances, namely, of the indigestible constituents of the food, and of the new compounds formed by the vital process

**Geine* may be defined as that substance in the soil on which plants feed.

The latter substances have been produced in consequence of the formation of fat, muscular fibre, cerebral and nervous substance, and are quite incapable of being converted into the same substances in any other animal organism.

Exactly similar conditions must subsist in the vital processes of plants. When substances, which are incapable of being employed in the nutrition of a plant, exist in the matter absorbed by its roots, they must be again returned to the soil. Such excrements might be serviceable and even indispensable to the existence of several other plants. But substances that are formed in a vegetable organism during the process of nutrition, which are produced, therefore, in consequence of the formation of woody fibre, starch, albumen, gum, acids, &c., cannot again serve in any other plants to form the same constituents of vegetables.

The consideration of these facts enables us to distinguish the difference between the views of *Decandolle* and those of *Macaire-Princep*. The substances which the former physiologist viewed as excrements, belonged to the soil; they were undigested matters, which, although not adapted for the nutrition of one plant, might yet be indispensable to another. Those matters, on the contrary, designated as excrements by *Macaire-Princep*, could only in one form serve for the nutrition of vegetables. It is scarcely necessary to remark, that this excrementitious matter must undergo a change before another season. During autumn and winter it begins to suffer a change from the influence of air and water; its putrefaction, and at length, by continued contact with the air, which tillage is the means of procuring, its decay are effected; and at the commencement of spring it has become converted, either in whole or in part, into a substance which supplies the place of humus, by being a constant source of carbonic acid.

The quickness with which this decay of the excrements of plants proceeds, depends on the composition of the soil, and on its greater or less porosity. It will take place very quickly in a calcareous soil; for the power of organic excrements to attract oxygen and to putrefy, is increased by contact with the alkaline constituents, and by the general porous nature of such kinds of soil, which freely permit the access of air. But it requires a longer time in heavy soils consisting of loam or clay.

The same plants can be cultivated with advantage on one soil after the second year, but in others not until the fifth or ninth, merely on account of the change and destruction of the excrements which have an injurious influence on the plants being completed in the one, in the second year; in the others not until the ninth.

In some neighborhoods, clover will not thrive till the sixth year; in others not till the twelfth; flax in the second or third year. All this depends on the chemical nature of the soil; for it has been found by experience, that in those districts where the intervals at which the same plants can be cultivated with advantage, are very long, the time cannot be shortened even by the use of the most powerful manures. The destruction of the peculiar excrements of one crop must have taken place before a new crop can be produced.

Flax, peas, clover, and even potatoes, are plants the excrements of which, in argillaceous soils, require the longest time for their conversion into humus; but it is evident, that the use of alkalies and burnt lime, or even small quantities of ashes which have not been lixiviated, must enable a soil to permit the cultivation of the same plants in a much shorter time.

A soil lying fallow owes its earlier fertility, in part, to the destruction or conversion into humus of the excrements contained in it, which is effected during the fallow season, at the same time that the land is exposed to a further disintegration.

In the soils in the neighborhood of the the Rhine and Nile, which contain much potash, and where crops can be obtained in close succession from the same field, the fallowing of the land is superseded by the inundation; the irrigation of meadows effects the same purpose. It is because the water of rivers and streams contain oxygen in solution, that it effects the most complete and rapid putrefaction of the excrements contained in the soil which it penetrates, and in which it is continually renewed. If it was the water alone which produced this effect, marshy meadows should be the most fertile.

It follows from what has preceded, that the advantage of the alternation of crops is owing to two causes.

A fertile soil ought to afford to a plant all the inorganic

bodies indispensable for its existence in sufficient quantity and in such condition as to allow their absorption.

All plants require alkalies, which are contained in some, in the *gramineæ* for example, in the form of silicates, in others, in that of tartrates, citrates, acetates, or oxalates.

When these alkalies are in combination with silicic acid the ashes obtained by the incineration of the plant contain no carbonic acid; but when they are united with organic acids, the addition of a mineral acid to their ashes causes an effervescence.

A third species of plants requires phosphate of lime, another, phosphate of magnesia, and several do not thrive without carbonate of lime.

Silicic acid* is the first solid substance taken up by plants; it appears to be the material from which the formation of the wood takes its origin, acting like a grain of sand around which the first crystals form in a solution of a salt which is in the act of crystallizing. Silicic acid appears to perform the function of woody fibre in the *Equisetaceæ* and bamboos, just as the crystalline salt, oxalate of lime, does in many of the lichens.

When we grow in the same soil for several years in succession different plants, the first of which leaves behind that which the second, and the second that which the third may require, the soil will be a fruitful one for all the three kinds of produce. If the first plant, for example, be wheat which consumes the greatest part of the silicate of potash in a soil, whilst the plants which succeed it are of such a kind as require only small quantities of potash, as is the case with the *Leguminosæ*, turnips, potatoes, &c.; the wheat may be again sowed with advantage after the fourth year; for, during the interval of three years, the soil will, by the action of the atmosphere, be rendered capable of again yielding silicate of potash in sufficient quantity for the young plants.

The same precautions must be observed with regard to the other inorganic constituents, when it is desired to grow different plants in succession on the same soil; for a successive growth of plants, which extract the same component parts, must gradually render it incapable of producing them. Each of these plants, during its growth, returns to the soil a certain quantity of substances containing carbon, which are gradually converted into humus, and are for the most part equivalent to as much carbon as the plants had formerly extracted from the soil in the state of carbonic acid. But although this is sufficient to bring many plants to maturity, it is not enough to furnish their different organs with the greatest possible supply of nourishment. Now the object of agriculture is to produce either articles of commerce, or food for man and animals, but a maximum of produce in plants is always in proportion to the quantity of nutriment supplied to them in the first stage of their development.

The nutriment of young plants consists of carbonic acid, contained in the soil in the form of humus, and of nitrogen in the form of ammonia, both of which must be sup-

*Silica, or siliceous earth, is the most abundant ingredient in the mineral kingdom, being one of the constituents of most rocks, and extensively distributed over the earth in the form of sand, quartz, carnelian, flint, &c. &c. It is also held in solution by the water of hot springs, as in the Geysers of Iceland, and the Azores, from which it is deposited, forming what is called *siliceous sinter*, and often incrusting the stems of plants and other bodies. The vegetable matter in some instances has disappeared, and the silica having taken its place we have silicified or petrified wood, &c. See Webster's *Description of the Island of St. Michael*, p. 208. From silica a substance is obtained which is considered as its base and called *silicon* and *silicium*. This base, combined with oxygen, constitutes silica, which is capable of combining with other bases; from this and other properties it is called acid. By combination with other substances, as potash, soda, &c., silica becomes soluble in water. These compounds are called silicates. A white, earthy substance is found beneath peat and in swampy lands and ponds, which has long been mistaken for calcareous marl. It has been proved to consist of the siliceous skeletons of "infusorial vegetables," if they may be so called, or of those equivocal beings which occupy the borders of the two kingdoms, and render it difficult, not to say impossible, to draw the line between them." This siliceous deposit has been found under nearly every peat bog in this country which has been examined. See Professor Bailey's paper in *American Journal of Science*, Vol. XXXV. p. 118, and Vol. XL. p. 174.

plied to the plants if the desired purpose is to be accomplished. The formation of ammonia cannot be effected on cultivated land, but humus may be artificially produced; and this must be considered as an important object in the alternation of crops, and as the second reason of its peculiar advantages.

The sowing of a field with fallow plants, such as clover, rye, buck-wheat, &c. and the incorporation of the plants, when nearly at blossom, with the soil, affect this supply of humus in so far, that young plants subsequently growing in it find, at a certain period of their growth, a maximum of nutriment, that is, matter in the process of decay.

The same end is obtained, but with much greater certainty, when the field is planted with *esparsette* (*sain-foin*) or lucerne. These plants are remarkable on account of the great ramification of their roots, and strong development of their leaves, and for requiring only a small quantity of inorganic matter. Until they reach a certain period of their growth, they retain all the carbonic acid and ammonia which may have been conveyed to them by rain and the air, for that which is not absorbed by the soil is appropriated by the leaves: they also possess an extensive four or six fold surface capable of assimilating these bodies, and of preventing the volatilization of the ammonia from the soil, by completely covering it in.

An immediate consequence of the production of the green principle of the leaves, and of their remaining component parts, as well as of those of the stem, is the equally abundant excretion of organic matters into the soil from the roots.

The favorable influence which this exercises on the land, by furnishing it with matter capable of being converted into humus, lasts for several years, but barren spots gradually appear after a lapse of some time. Now, it is evident, that after from six to seven years the ground must become so impregnated with excrements that every fibre of the root will be surrounded with them. As they remain for some time in a soluble condition, the plants must absorb part of them and suffer injurious effects in consequence, because they are not capable of assimilation. When such a field is observed for several years, it is seen, that the barren spots are again covered with vegetation, (the same plants being always supposed to be grown,) whilst new spots become bare and apparently unfruitful, and so on alternately. The causes which produce this alternate barrenness and fertility in the different parts of the land are evident. The excrements upon the barren spots receiving no new addition, and being subjected to the influence of air and moisture, they pass into putrefaction, and their injurious influence ceases. The plants now find those substances, which formerly prevented their growth, removed, and in their place meet with humus, that is, vegetable matter in the act of decay.

We can scarcely suppose a better means of producing humus than by the growth of plants, the leaves of which are food for animals; for they prepare the soil for plants of every other kind, but particularly for those to which, as to rape and flax, the presence of humus is the most essential condition of growth.

The reasons why this interchange of crops is so advantageous,—the principles which regulate this part of agriculture, are therefore, the artificial production of humus, and the cultivation of different kinds of plants upon the same field, in such an order or succession, that each shall extract only certain components of the soil, whilst it leaves behind or restores those which a second or third species of plant may require for its growth and perfect development.

Now, although the quantity of humus in a soil may be increased to a certain degree by an artificial cultivation, still, in spite of this, there cannot be the smallest doubt that a soil must gradually lose those of its constituents which are removed in the seeds, roots, and leaves of the plants raised upon it. The fertility of a soil cannot remain unimpaired, unless we replace in it all those substances of which it has been thus deprived.

Now, this is effected by manure.

To be Continued.

Specimens of the Centre-draught Plough described in the article from the Farmer's Cabinet, may be examined at the office of the American Farmer; also in operation at our farm about 5 miles from the city, near the York Turnpike road—and where it will be seen that all that is said of them in that article is, according to our view of the matter, fully borne out.

For the American Farmer.

DR. HORTON'S REPLY TO STRICTURES ON HIS THEORY OF THE EARTH.

Mr. Editor—Your correspondent L. of Annapolis (?) has assailed my theory of the earth in so magisterial and positive a manner that I had at first determined not to reply, more especially as his communication is anonymous. But lest my silence might be construed to my disadvantage, I have concluded to make a few brief remarks on each objection, for I cannot dignify his positive assertions by the name of arguments. Let not your correspondent however be emboldened to repeat the offence. I contend not with a phantom; yet at the same time invite enlightened and liberal criticism on equal terms—a real name and a whereabouts.

Not to be outdone by your anonymous correspondent in generosity and politeness, I am sorry that it is not in my power (having a due regard for truth) to say that his production possesses the merit which he yields to mine—that of ingenuity.

His first objection to my theory is, "that it assumes a greater age to the world than the Mosaic cosmogony warrants, according to the common acceptance." In my hasty outlines of a theory I have assigned no particular age to the world, nor am I aware that Moses has; and as to the "common acceptance" of its age, I know not what it is, for that is the very point on which learned Doctors disagree. Some say the world is about 6000 years old—others, professing to believe in the truth of the Mosaic cosmogony, say 30,000; others again in the same category say some millions—and yet others that it had no beginning! The Chinese, as a nation, claim to be 30,000 years old. Among such a diversity of opinion, I think it would puzzle a greater philosopher than your learned correspondent to say what is the "common acceptance." Not being skilled in the language in which the Mosaic cosmogony was originally written, I am not prepared to express an opinion on the subject. But as I believe my theory to approach nearer truth than any other, *merely human*, that I have seen and understand, so I believe, that if there be any theory of DIVINE origin, it will be found when rightly understood to coincide in all essential points with that which I have imperfectly sketched out. Your correspondent might have spared this objection had he attended to what was written. Near the close of my first communication I have observed, "It is probable that this globe has not been in a habitable form longer than the period assigned to it by Moses."

His second objection is, that I have abandoned my first position, finding it untenable, and as an *after thought*, taken another.

How any individual—I care not how reckless—having common honesty and common discernment, could form such a conclusion, I know not. However much your correspondent may be disposed to distort my language, I trust to the discerning and unprejudiced it will be found generally correct, and that both agents were considered essential to a consistent production of the effects.—"Nothing but a disunion of the parts [by intestine commotion] would be required, the fragments being all highly electric, would fly asunder [after a disunion] by their own inherent properties." It is unpleasant to have to deal with one possessing so querulous and capricious a disposition; when the language is so plain that a school boy could not misunderstand it. If your correspondent really supposes that on a subject of so stupendous a character as the one on which I have written, I "called in the aid of electricity" to escape from a dilemma, he does me great injustice. Some persons, skilled in such matters, have been so dull as to think that that essay, short and imperfect as it is, shews strong marks of pre-cogitation. I wish I could say the same of the production of your correspondent, or that he ever thinks at all. I feel that I am engaged in a contest where the favour is all on one side; for I have learned nothing from the production of your correspondent that I did not learn at school; nor have I received from it one new idea. If the essay so unceremoniously handled, have no other merit, it possesses that of novelty or originality—Let us have a theory from your correspondent—his theory.

3d Objection. That the fragments of the Sun, "in sailing about," would endanger the earth.

How futile! when the SOVEREIGN RULER of the Universe said "Let there be light"—when a world, perhaps when hundreds of worlds, were to be produced, does not your correspondent think that extraordinary powers were brought into requisition? That when the work was finished,

they ceased so far as they had been necessary to produce the intended effect. The theory supposes that the sun contained all the matter of which the planetary system was formed. That by some great internal commotion it burst asunder with great force. That it and of course the fragments being highly electric, repelled each other, &c. &c. as has been before stated; but it does not then follow that this same process is eternally going on. Nor is it legitimate to conclude that because Mr. Herschell saw a fragment of the sun thrown off that it was a "new world," or that our devoted earth was in danger—So that all the keen irony and biting satire of your wise correspondent must fall with double severity on his own head.

It were to be regretted that your correspondent had not, in the plenitude of his wisdom, pointed out the "principles which are manifestly incorrect"—instead of telling us that which every school boy knows, and which nobody ever thought of denying, that two bodies, the one excited positively, the other negatively, would *repel* each other. Nothing could set in a stronger light the kind of being who raised the objections under consideration than this individual objection. The premises did not warrant any such idea—The objection was uncalled for, only to show off the gentleman's learning; yet it will be a wonder if I do not teach him something new before I have done with him, even on that trite subject—electricity.—But I fear he is too wise to learn!

4th Objection. That if the theory were correct, the sun would soon disappear.

This objection has been answered already. Those causes, and that state of things which existed at creation do not now exist. The essay does not say the scintillations are *continually* going on. This is a chimera of the gentleman's brain, or a deduction, not from the essay, but from the discoveries of Herschell, from which the writer dissents.

5th Objection. The earth would go to atoms.

Why? Now let us test the gentleman's logic. Dr. Horton's premises. The sun, by "some internal commotion (say volcanic,) throws off a body like itself highly electric, which two bodies *repel each other*." Now for the wise conclusion of the objector—Ergo, the earth which was thrown off from the sun is a "great reservoir" of electricity, and must necessarily "go to atoms." Very logical! But here comes the club of Hercules, the last and strongest argument, for I must in the abundance of my good nature admit it is worth more than all the others put together.

6th Objection. That the repulsion of electricity is so much greater than the gravity, that the earth would be driven off [in a right line] forever. This would undoubtedly have been the case but for one very material circumstance which your correspondent either overlooked, or of which he was ignorant, and of which I shall endeavor to instruct him, *Deo juvante*.

In receding from the sun that side of the earth next to it would be electrified *plus*, while the side opposed to it would be *minus*; the one side would be repelled, and the other attracted by the sun, thus causing a rotation of the earth on its axis, or what is called the diurnal motion of the earth. This motion, which is at the rate of about one thousand miles an hour, must ever continue, while the cause exists, the sides successively becoming *plus* and *minus* as they are turned to or from the sun. The rapid motion of the earth on its axis continually draws it into a *curvilinear* orbit round the sun, and prevents its being driven off in a tangent, or in a rectilinear direction.

I thought I had done with your 'troublesome customer,' and doubt whether he is a subscriber to your paper. No matter, I find he has one other objection.

Objection 7th. The earth is 3,000,000 miles nearer the sun at one season of the year than another. If this circumstance prove anything, it proves the correctness of my theory. Now I cannot conceive of any power, save that of electricity, which could cause the earth to move in an elliptical orbit while it keeps the sun in one focus of the elipsis. The North Pole always pointing to the same part of the Heavens, and being elevated 23½ degrees above the plane of the earth's orbit, the South Pole is turned, six months in the year, more toward the Sun—The South Pole is more highly electric than the North, and consequently during the six months, while it is thus turned toward the Sun, the earth is driven further from it. This will, of course, cause a regular elipsis of its orbit, and the Sun to be in one focus of the elipsis. This position, or opinion, is strengthened by magnetic phenomena,

magnetism partaking in some degree of the nature of electricity. The South, or depressed Pole of the earth appears to be not only more highly electric, but also magnetic, and an *aura* or stream is constantly passing over every part of the earth's surface from the South to the North pole to restore an equilibrium, which equilibrium is prevented by a want of capacity in the Northern polar regions to retain the portion imparted. Hence the polarity of the magnetic needle, as it will, as a natural consequence, always lie parallel with the magnetic stream or *aura*. Hence, also, the Aurora Borealis, which is electricity passing always off, though not always visible, from the Northern polar region.

In conclusion, I think the modest pretensions of the introductory observations of my essay should have been sufficient to screen it from captious and ill-natured criticism. It was not written for gain, nor was it written for fame, except such as might flow spontaneously should it be found worthy of attention. All my enquiries have, through a somewhat protracted and eventful life, been directed to the ascertainment of truth; and to him who convinces me, in a proper manner, of error, I will always bow with thankful submission.

W. L. HORTON.

Woodlawn, Harford co. April 9th, 1842.

MURRAY'S CRUSHER AND HORSE-POWER.

LITTLERORUNA, APRIL 15th, 1842.

Mr. Wm. Murray, Powhatan Factory—

Sir: I have delayed thus late in complying with your request, to give you my written opinion of the "horse power and corn crusher," which you put up for me; first, because I entertained doubts, not of the validity of the principle, but of the success of the operation of each machine; secondly, because I desired to be slow, either to condemn or approve of either, without having given it a thorough and impartial test.

I am free to confess, that until very recently, I was much disappointed in the result of the test of the horse power; but as I have since discovered, the fault did not rest in either the principle on which it was constructed, or in the construction of the machine itself; but merely in the position of some of its parts, which was altogether consequent upon its peculiar location; for it is owing to that, principally, and to the adaptation of all its parts, one to another, that the success of the operation depends.

After a few unimportant alterations which I made myself, and which cost me nothing but a little loss of time, and of patience, I have found the power to answer to admiration—before these alterations I could cut straw or crush corn with it with great facility; but it was when I came to test its powers by the great force required for thrashing grain, that I found these changes necessary.

I have been applying it to a small thrasher adapted to a one-horse-endless-chain power; and with it we have gotten out, with ease, at the rate of 200 bushels of grain per day; and with a thrasher adapted to the power, I have not the least hesitation in asserting that I could get out from 3 to 400 bushels of grain per day. I have tried two different iron-gear powers and find this to do better work, with two horses, than they did with four and six; besides the first cost of the iron powers is twice the amount of this; and if any thing gets out of order with them they require the machinist or blacksmith; but with this, any farmer who has the smallest particle of ingenuity, can make all the repairs it may ever require.

In fine, for cheapness of first cost, capability of good execution—as requiring but half the power, and not being liable to get out of order, it is, in my humble opinion, the best horse power a farmer can have.

As to the corn and cob-crusher, I had my doubts about that also. You may recollect that the first you sent me had the teeth of the roller made of very bad iron, on account of which I very much doubted if they could be made strong enough, of thin size, to stand great power; but from the test I gave them, I am satisfied they can; the one I have is not one of your complete crushers, for the mill is worn by an injury received in transportation, and it has not your new improvement, by which the cob is broken much finer ere its passage into the mill, and the process of grinding, thereby greatly facilitated; nevertheless, I have ground on a wet day, corn brought through the rain (by the watch,) 5 bushel baskets of corn on the cob, in one hour, which I think is equal to about 10 bushels of ground stuff.

If the statement of these facts can be of any benefit

you, you are at liberty to make what use you may please of them; tho' they are thus drawn out in detail, more for the purpose of expressing to you my satisfaction, at the same time that I think they may not be disinteresting to you. Very respectfully, &c.

F. B. LAURENSEN.

SOWING CORN BROADCAST.

To the Editor of the American Farmer.

In the Farmer of April 20th, I observe over the signature of "Ledyard" some enquiries in relation to sowing corn broadcast, and the best method of securing the crop.

Having tried the experiment last year I offer a few suggestions as the result of my experience. I sowed a few acres with a view of ploughing it in as a green crop for the benefit of the soil, but was tempted by its luxuriant appearance and a scarcity of other provender, to make use of it for that purpose. The quantity of seed sown was about 2 bushels per acre. Perhaps in a very rich soil, the use of a smaller quantity of seed might be attended with the objections named in the remarks which follow the enquiries of your correspondent, viz.—"the tendency of weeds to check its growth."

After the ground is well harrowed and sown, I would recommend your correspondent to make use of the cultivator to cover the seed—which by the way I have found an excellent improvement for covering seed wheat. The ground should then be rolled smooth, which is all that is necessary to be done until the time of harvesting arrives. My crop was cut just at the time the grain began to harden—and the lower leaves of the stalk were becoming shrivelled. The fodder was suffered to lay on the ground for a day or two, until the stalks had become sufficiently wilted, to be made use of as bands for tying the fodder in small sheaves; after being bound the sheaves are set up in small shocks of about one dozen sheaves each, and capped by placing one sheaf on the top as a crown to shelter the shock from rain. In this state it remained until perfectly cured, when it was carted off and stacked up in a convenient place for feeding. I find this far superior to the "whate straw" of our friend Paddy, for it don't require any thing at all.

E. P.

P. S. With respect to the proper time of sowing, I would suggest that the usual time of planting corn is the most fit season where the crop is to be used as dry fodder.

Balt. Co. April 21st, 1842.

[Where the object is either for soiling or fodder, we think that 4 bushels of seed to the acre, upon good, well manured ground, would not be too much. Ed. Am. Far.]

From the Farmer's Cabinet.

THE CENTRE-DRAUGHT AND SUBSOIL PLOUGHS.

Mr. Editor:—Happening on a visit to a friend at New Castle, I accompanied him to Delaware City, on Tuesday last, where, at the post-office, I saw a notice that on the afternoon of that day there would be an exhibition of the Prouty Centre-Draught Plough, accompanied by the Subsoiler, at the farm of Mr. P. Reybold, St. George's; and never having witnessed the performance of either, my friend and I determined to be present on that interesting occasion. In spite, therefore, of the weather, which was so bad as to prevent many from being present, I found some first-rate ploughmen on the ground, and saw what I shall never forget—the working of the most perfect implements that I ever expect to see, although the pleasure of meeting you there was denied, you having just left the scene of operations. My friend was so struck with the working of these remarkable ploughs, that he has ever since been urging me to say something about it for publication in the Cabinet, considering it worthy record; and as the scene is still fresh in my recollection, I have complied, in hope that those who were absent might become acquainted with a few particulars relating to a trial at which they might well wish they had been present.

I found the ploughs at work on a piece of clover-land that had been thickly covered with manure from the barn-yard, for the purpose of ascertaining whether both could be covered by the centre-draught plough, so effectually as to leave nothing in sight, as had been represented to be the fact, by those who had seen its powers; and here we were witnesses of the fact, for after the plough had passed, not a particle of either dung or turf was to be seen, and no one would have known but the field had been fallow! The plough followed the horses surprisingly easy, which is, I understand, its peculiar quality, but I could perceive that much of its ease of draught, un-

der circumstances where other ploughs would have "risen up and walked off," as some one says, arose from the use of a small wheel—the first I had ever seen attached to a plough—fixed near the end of the beam; the pressure which fell upon it, keeping the plough in its place, even when choked with the long, rolling dung. And this was not the only good effect, for it was as great a cause of ease to the ploughman as to the horses, which stepped off with ease and confidence, being relieved from the checks and snatches which so often take place, by reason of the swing plough sinking occasionally too deep in the soil.

But to the principle, which has been patented, is this plough indebted for its great superiority; for, leaning as it does, very much towards the furrow whilst going, it is made to undermine the land side, taking up a portion of the next furrow in a state of pulverized soil without turf, and throwing it over, causing it to fall exactly in the interstice between that and the last-turned furrow—that particular spot which, with all other ploughs, constitutes the seam, from whence the grass turned over, is seen to spring with redoubled vigour, showing very distinctly, long rows of vegetation, from one end of the field to the other. By this undermining operation, a portion of the turf is left attached to the soil, to be turned over with the next furrow-slice to the bottom of the furrow; and it is owing to this peculiarity of construction, that the centre-draught plough has taken the premium for the lightest draught, in every trial to which it has been submitted, by the only criterion by which to form a judgement, namely the dynamometer; and it is plain to see that this must be so, for the next furrow, undermined and deprived of its support by cutting away of its lower or aris edge, as it might be termed, must, in the nature of things, turn easier and more completely, than if all had remained square and unremoved. But there are other peculiarities still to be noticed; for the plough is longer in the ground than any I had ever before seen, which is the cause of its steadiness, so remarkable in going; this great length might have been in a degree objectionable, had that not been obviated by the proportionate greater length of the handles and beam, which are so mathematically adjusted, that the body of the plough forming a fulcrum, the ploughman has the power to poise the machine with the ease of a well-adjusted pair of scales; the weight of a few ounces being sufficient to raise or lower the beam or handles, with the utmost precision.

The construction of the point and share is a new invention, and seems to be about the most perfect that can be devised. In the common cast-iron plough, as soon as the point is worn away from the land-side, it is useless, and requires to be replaced by a new one; but here, the point is moveable, and consists of a chisel; the wearing away from the land-side only sharpening it to a narrower point, which can be turned in an instant; and when that also is worn away, then the other end, which forms another chisel, can be brought into operation exactly in the same way; the wing of the share also, admitting of turning; so that every plough has four points and two shares; and as with every new plough an extra set of points and wings are given, every purchaser receives eight points and four shares. These are contrived so as to fix into a socket, where they are confined by a single bolt in the most secure manner. A person present at the trial informed us, that the plough in use had been constructed at the manufactory at Boston, from a pattern for the beam and handles sent from this part of the country—they are certainly the most perfectly adapted of any that I have ever before seen.

So soon as this plough had passed, throwing over a furrow to the depth of the surface-staple of the soil only, the subsoil plough, invented by Messrs. Prouty, followed in the bottom of the furrow, performing its operation to "a charm." It was drawn by a pair of small horses, and seemed to follow with an ease that astonished us all, pulverizing the subsoil to the depth of a foot if put to it, and leaving it in such a state, that the lad who guided it, preferred walking on the land-side of the furrow, rather than to drag his feet ankle-deep in the loosened earth; in every respect this implement is perfect, and will be the means of augmenting the crops to a profitable extent; opening the subsoil to a depth sufficient to carry off a superabundance of moisture in a rainy season, and admitting a full evaporation from below in a time of drought—circumstances, essentially favourable to the growth of corn, which every one knows is accelerated by heat, when accompanied by a proper degree of moisture: I therefore

consider the subsoil plough the perfection of improved cultivation; but to be able properly to appreciate its services, it is necessary to witness its operations; and although not so easily worked in some soils as in others, it will be found of the greatest service in all, giving the means of gradually deepening the surface-soil, permitting the washings of the manure to descend into the pulverized subsoil, where it will be retained, instead of being permitted to pass off as heretofore, by the impenetrable hardpan, whenever the earth is glutted with ruin; and hence it is, that the soil might be deepened every time it is turned; the operation of subsoiling, however, not being necessary perhaps, oftener than once in three or four years. To witness the subsoil plough passing up and down the furrows to the depth of about a foot, by the strength of a pair of small, active horses, walking about four miles an hour, with the ease, comparatively, that a man might cut cheese with a knife, was to me a treat that I would not have lost for any sum that could be offered; it has opened the subsoil of my own mind, and I calculate the augmentation of its future crops will be pretty considerable. The lad who guided the subsoil plough, and who was competent to the task, was not, comparatively speaking, much higher than the handles; another boy about the same height took his place in his absence, and by these two lads the ploughs upon the farm of Mr. Reybold are worked, in a manner that would do credit to many full-grown men; they are fine lads, and well deserve this notice, which is only their due. And already do I perceive the effect of that subsoiling which I have said my mind has received, for I can now see, that very much of the labour of a farm, which has heretofore been performed by men, might be quite as well executed by lads; and the thought just now strikes me, that a great portion of the difference between the value of agricultural labour in this country and England, might be obviated, by substituting the services of lads for that of men; for there is, comparatively, little of the labour on a farm in ordinary times, that may not be performed by stout lads; and I would therefore, propose that the youths of that description which are so numerous at the alma-house and other charitable institutions of every town and city, might be put to that purpose, receiving in return their food and clothing; the institution, as well as its inmates being thus relieved, one from receiving and the other from paying the wages of idleness—two states of being, between which it would be difficult to know how to choose. Here would be a saving of another "rent" at once, and the thing would be made to work to a "charm," for by means of the long handles of the Prouty plough, and the wheel to regulate the depth, a lad of 14 or 15 is quite competent to the task of guiding it. I understand that Mr. Reybold has purchased both these ploughs, and means to go thoroughly into a general system of subsoiling, which will be the means, I have no doubt, of augmenting his crops far more than the amount of their cost the present season; his potatoe-crop showing a nearer approximation to a "Vermont," than any that has hitherto been grown in this part of the country.

I look forward with anticipation to the "day's ploughing," which is to be given under the auspices of the Agricultural Society of Philadelphia, with ploughs of Prouty's make as advertised in the pages of the Cabinet; and trust that the committee of arrangement will, in your next number, fix a day for the trial; if it be delayed until the middle of the next month, so that the press of early spring cultivation shall have passed, I shall expect to meet hundreds of my friends upon the joyous occasion. And if such men as he who guided the plough at Mr. Reybold's be present—I remember his name was Thomas—I shall expect to see first-rate work. I tell you—may I propose to Mr. R. to bring him up? A Subscriber.

March 20th, 1842.

MEMORIAL.

To the honorable the Chairman and Members of the Committee on Manufactures:

The resolutions passed by the Legislature of Kentucky, requesting the members of Congress from that State to use their best exertions to cause such legislation on the part of Congress as would relieve tobacco produced in the United States from the heavy duties and monopolies with which it is burdened by most of the nations of Europe, must be my excuse for addressing you this memorial.

To protect American commerce and the products of

American industry from foreign prohibitions, duties, and regulations, by countervailing duties, all other means having failed to accomplish that object, is, I believe, a duty now enjoined as well by the interests as honor of our country. Previous to the formation of the present Constitution, the impossibility of the several States, while acting each for itself, protecting their commerce and the products of their industry, when shipped to foreign ports, from the prohibitions, burdensome duties, and oppressive regulations imposed on them by foreign nations, was felt and acknowledged by all as one of the greatest evils arising from the then existing state of things; and a strong anxiety to have this evil corrected is known to have been one of the greatest inducements to the formation of the Constitution, and, beyond all question, was one of the chief arguments urged for its adoption by the States. No well-informed man will contend that the Constitution would ever have been accepted by the people, if it had not contained the clause by which the power and the correlative duty of regulating commerce with foreign nations was taken from the several States and bestowed on Congress, as one of the departments of the Federal government.

Although the oppressions on our commerce from these prohibitions, duties, and regulations, of nearly every nation in Europe, have been continued ever since the Constitution granted the power and imposed the duty on Congress of regulating commerce with foreign nations, yet, up to this time, that duty remains undischarged; and each foreign nation, without any regard to reciprocity or equality of duties, has been permitted to take counsel wholly from its avarice, without any regard to justice, until they have ceased to fear that our Government will seek redress by the only means in its power to enforce it.

The result of this abandonment of its duty by Congress, and leaving commerce to take care of itself, aided by such assistance as the Executive department has been able to give it, by exercising the equivocal power of regulating our commerce with foreign nations, by treaty stipulations, has been such as was naturally to be expected; until, at this time, the following facts exist:

The produce of the labor of the citizens of the United States, shipped to the various nations of Europe, amounting annually to about ninety millions of dollars, pays an average tax over one hundred per cent., while the productions of all European nations, imported into the United States, amounting annually to about one hundred millions of dollars, pay an average tax or duty of less than twenty per cent. In other words, from the productions of the labor of the citizens of the United States, from which those who own the soil and perform the labor of producing and transporting the produce to market receive ninety millions of dollars; foreign nations, by means of duties levied in different ways, receive ninety-eight millions of dollars.

It is not to be wondered at that the agriculturists of the United States have not prospered in proportion to their industry, when they do not receive one-half the benefit of their own labor. With a genial climate, a rich soil, and industry and economy on the part of our planters and farmers, surpassed by none in the world, their aggregate prosperity and wealth is far less than that of the owners of the soil in Great Britain, France, Germany, or any other nation in Europe, exercising the same skill and industry in the cultivation of the earth.

It is the duty of their representatives in Congress to inquire into the cause from whence this effect springs, and apply the remedy, if one can be found within their power. I have endeavored to find out this cause, and sincerely believe it principally, if not wholly, proceeds from the fact that our farmers and planters are not permitted to trade with the subjects of foreign nations on equal terms; but, on the contrary, they or their agents are compelled to give more than one-half of the produce of their farms and plantations, or, what is the same thing to them, more than one-half the money it would sell for, to obtain the privilege of importing and selling the remainder in Europe, while the citizens of European nations give less than one-fifth of the produce of their labor for the privilege of importing and selling the remainder in the United States. In figures the matter stands thus:

The products of American industry	
sell in Europe, after deducting freight	
and charges, except duties, in round	
numbers, for	\$204,500,000
which we receive	91,000,000
And lose in paying duties	\$113,500,000

The products of European industry sell	
in the United States, after deducting	
freight and other charges, except du-	
ties, for	\$90,000,000
Of which the Europeans receive	73,000,000
And lose in paying duties	\$17,000,000

Showing the average amount of duties, levied by the nations of Europe on our exportations to them, to be upwards of six and a half times as great as the average amount of our duties levied on their exportations to the United States.

But, great and unjust as this inequality is on the total amount of exportations from the United States, it becomes still more startling in its manifest injustice when examined as to a particular export—the staple, to a great extent, of several particular States. Unmanufactured tobacco pays, in Great Britain, since the 15th May, 1840, a duty of 75 cents per pound, or upwards of 1,250 per cent., valuing the pound of tobacco at 6 cents; in Austria, within a fraction of 60 cents per pound, or one thousand per cent.; in Prussia, 30½ cents per pound, or upwards of five hundred per cent.; and France levies, by her *Regie* or indirect duty, about one dollar per pound, or 1,666 2-3 per cent.

From the best calculation I could make, which is too voluminous to go into this communication, the different nations enumerated in table No. 3, excluding Russia, Prussia, and Portugal, for which I have not completed the calculations for want of time—

On this amount of average annual value of	
tobacco shipped from the United States,	
for the years 1839, and 1840, to wit, on	\$9,225,145
There is levied by the other European	
nations an annual tax of	32,463,540
Showing the amount for which American	
tobacco sells in Europe, exclusive of	
freight and other charges, except duties,	
to be	41,688,685
of which foreign Governments retain upwards of three-	
fourths, and the tobacco planters receive less than one-	
fourth.	

After this plain statement of facts, is it to be wondered at that the tobacco-growing States have increased, in population and wealth, less than any other of the agricultural States of the Union, and that the agriculturists of the whole Union, considering the productiveness of the soil, capital, industry, skill, and economy used, have increased in proportion less than either the mercantile or manufacturing portions of their fellow-citizens? No individual or community can prosper unless they get at least a fair proportion of the benefit of their own labor.

I cannot persuade myself there is an American statesman who will not acknowledge that a corrective must be found for this evil; and before they can, with propriety, object to the remedy now proposed, it is their duty to propose one equally or more likely to prove efficient. Entreaty, protests, and attempts at negotiation, urged with a zeal and ability by our Government at home, and our ministers abroad, equal to the importance of the subject, for fifty years, have failed; and there is no other remedy but countervailing duties.

In the words of Mr. Jefferson, in a report which he made to Congress on the 16th of December, 1793, on the subject of commercial privileges and restrictions, "should any nation, contrary to our wishes, suppose it may better find its advance by continuing its system of prohibitions, duties, and regulations, it behooves us to protect our citizens, their commerce and navigation, by counter prohibitions, duties, and regulations, also. Free commerce and navigation are not to be given in exchange for restriction and vexations; nor are they likely to produce a relaxation of them."

My own opinion is, that an additional duty of ten per cent., with a perspective annual increase of five per cent. on such articles as might be selected by the committee, when imported from nations of whose prohibitions and duties we have cause to complain, with a proviso that such additional duties should cease with a cessation of the regulations and duties of which we complain, would speedily bring the relief we desire.

PHILIP TRIPLETT.

Washington, March 28th, 1842.

*From the want of specific returns as to places of shipment of some unimportant articles of importation, and want

of agreement in home and foreign returns as to value of some articles of exportation, the above calculation is not stated as absolutely accurate. It was made as to exportation, by taking the American custom-house returns of articles, their value and destination, and calculating the duties levied on them in Great Britain, Russia, France, Austria, and Prussia, from the tariff of their duties furnished me by the State Department; and, as they are the nations with whom we have the greatest trade, they are hereto annexed, marked No. 1. And the amount levied on tobacco in France, by their indirect system, was calculated for the years 1839 and 1840, according to the data given in House doc No. 195, 1st session 26th Congress, hereto annexed, marked No. 2, and tables extracted from the returns of 1839 and 1840, made with much care and labor, also annexed, Nos. 3 and 4; the object being to show, at one glance, the immense inequality between the duties as levied on our exports by the different nations of Europe, the amount of our importations from them severally, and the amount and per cent. imported free of duty from each nation—to show the extent of our capacity to operate on the interest of each nation by countervailing duties.

MODE OF MANUFACTURING ELAINE AND STEARINE FROM LARD, &c.:

Patented by John H. Smith, 122 Front Smith street, New York city.

To all whom it may concern: Be it known that I, John H. Smith, of the city of Brooklyn, in the county of Kings, and State of New York, have invented a new and useful improvement in the manner of separating from each other the elaine and stearine which are contained in lard, by means of which improved process the operation is much facilitated, and the products are obtained in a high degree of purity; and I do hereby declare that the following is a full and exact description thereof:

The first process to be performed upon the lard is that of boiling, which may be effected either by the direct application of fire to the kettle, or by means of steam; when the latter is employed, I cause a steam tube to descend from a steam boiler into the vessel containing the lard; this tube may descend to the bottom so as to present a large heating surface to the lard, provision being made for carrying off the water and waste steam in a manner well known; but I usually perforate this tube with numerous small holes along the whole of that portion of it which is submersed below the lard, thus allowing the whole of the steam to pass into and through the lard. To operate with advantage, the vessel in which the boiling is effected should be of considerable capacity, holding say from ten to a hundred barrels. The length of time required for boiling will vary much, according to the quality of the lard; that which is fresh may not require to be boiled for more than four or five hours, whilst that which has been long kept may require twelve hours. It is of great importance to the perfecting of the separation of the stearine and elaine, that the boiling should be continued for a considerable period as above indicated.

My most important improvement in the within described process, consists in the employment of alcohol, which I mixed with the lard in the kettle, or boiler at the commencement of the operation. When the lard has become sufficiently fluid, I gradually pour and stir into it about one gallon of alcohol to every eighty gallons of lard, taking care to incorporate the two as intimately as possible; and this has the effect of causing a very perfect separation of the stearine and elaine from each other by the spontaneous granulation of the former, which takes place when the boiled lard is allowed to cool in a state of rest. I sometimes combine camphor with the alcohol, dissolving about one fourth of a pound in each gallon of alcohol, which not only gives an agreeable odor to the products, but appears to co-operate with the alcohol to effect the object in view; the camphor, however, is not an essential ingredient, and may be omitted. Spirit of lower proof than alcohol may be used, but not with equal benefit.

After the boiling of the lard with the alcohol has been continued for a sufficient length of time, the fire is withdrawn, or the supply of steam cut off, and the mass is allowed to cool sufficiently to admit of its being laded, or drawn off into hogheads, or other suitable coolers, where it is to be left at perfect rest until it has cooled down, and acquired the ordinary temperature of the atmosphere; as the cooling proceeds, the granulation consequent upon the separation of the stearine and elaine will take place and become perfect. The material is then to be put into bags, and pressed moderately, under a press of any suitable kind, which will cause the elaine to flow out in a state of great purity, there not being contained within it any appreciable portion of the stearine; this pressure is to be

continued until the stearine is as dry as it can be made in this way.

The masses of the solid material thus obtained are to be re-melted, and in this state to be poured into boxes or pans, of a capacity of ten or twelve gallons, and allowed to form lumps which I denominate blocks; then when removed from the vessels and piled, or stacked up for a week or ten days, more or less, the room containing it should be at a temperature of nearly 80°, which will cause a sweating or oozing from the blocks, and they will improve in quality; the blocks are then to be rolled in cloths or put into bags, and these placed between plates, and submitted to very heavy pressure by means of a hydraulic press. After this pressure it is brought again into the form of blocks, and these are to be cut up by means of revolving, or other knives, or cutters; the pieces thus obtained are to be put into bags, and subjected to the action of hot water, or of steam, in a press, until it becomes hard enough to be manufactured into candles, or put up for other purposes to which it may be desired to apply it.

The manner of subjecting it to the action of heated water, or of steam, is to place the bags containing the stearine in a box, or chest, into which heated water, or steam, may be introduced, but not to such extent as to fuse the stearine. A follower is then to be placed against the bags contained in the box, or chest, and moderate pressure made upon them; the material will now be found to have acquired all the required hardness, and to possess a wax-like consistence, such as would generally cause it to be mistaken for wax.

I am aware that alcohol has been used for the purpose of separating elaine and stearine from each other in analytical chemistry, but the lard or other fatty matter consisting of these substances, has, in this case, been dissolved in the heated alcohol, and the whole has been suffered to cool together; this process would be altogether inapplicable to manufacturing purposes, as the cost would exceed the value of the product. In my manufacturing process, instead of dissolving the lard in alcohol, I add a small proportionate quantity of the latter to the former, the whole of which is driven off at an early period of the ebullition, but by its presence, or catalytically, disposes the elaine or stearine to separate from each other, which they do after long boiling and subsequent cooling. I do not, therefore, claim the use of alcohol in separating elaine and stearine from each other, by dissolving the fatty matter in heated alcohol, and by subsequently cooling the solution; but what I do claim as of my invention, and wish to secure by letters patent, is the within described method of effectively promoting their separation, by incorporating alcohol, highly rectified spirits with the lard in small proportionate quantities, say one gallon, more or less, of said alcohol, or spirit, to eighty gallons of lard, and then boiling the mixture for several hours, by which boiling the whole of the alcohol will be driven off, but will have left the elaine and stearine with a disposition to separate from each other on subsequent cooling, as herein indicated and made known.

JOHN H. SMITH.

Witnesses,

T. H. PATTERSON,
H. S. FITCH.

ON THE CULTIVATION OF SALSIFY, (*Tragopogon portifolius*.) By the EDITOR.

One of the most delicious vegetables, of late introduction, is the Salsify, or vegetable oyster. Though more or less known for several years, yet, to the mass of the community, it is quite a new vegetable. It is rarely found in our market, and is scarcely seen beyond the precincts of the kitchen gardens of gentlemen in the vicinity of our large cities, who look upon it as one of the most valuable vegetables they cultivate, supplying the place, as one of its names indicates, of the oyster, and in perfection from December till June. A brief notice of it in our pages will, we hope, draw more attention to it, and induce many to plant; and it is rather with this view that we allude to it, for its cultivation is exceedingly simple, requiring no more care than the parsnip.

The seeds should be sown in April, in rows about ten inches apart, in good light rich soil, dug very deep, so that the roots may penetrate the earth and meet with no obstruction to make them crooked. Thin out the plants to the distance of four or six inches; give due attention during the season, and keep the beds clean by occasional hoeings between the rows and by hand weeding, and the plants will make a good growth.

In October, or early in November, the roots should be

taken up and housed in the cellar, precisely in the same manner as the parsnip; and may be used from time to time as needed. We have left them out all winter, as they are as hardy as the parsnip; and where there is a plentiful stock, one or two rows might remain until March or April, when the roots should be dug.

There are various methods of cooking the roots, but one of the most simple is to boil them, then mash and form them into cakes, and fry them in batter. Served in this way, they resemble a real "native" oyster, challenging even the palate of a grand gourmand to detect the substitute, and are an excellent accompaniment to many dishes, particularly in the country, where oysters are a rare article at all times.

An ounce or two of seed will plant a bed suitable for the wants of a small family.—*Magazine of Horticulture.*

BALTIMORE MARKET.

Rail Road Orders.—The rate of discount has further advanced to-day, we now quote the buying price by the brokers at 65 cents in the dollar.

Virginia Bank Notes.—We quote as last week, viz. the notes of the Wheeling Banks at 14 per cent discount and those of all the other Virginia Banks at 8 per cent discount.

Hogs.—The supply of Live Hogs has been quite full during the week, and the sales have generally ranged from \$3 50 to \$3 75 per 100 lbs. A few of inferior quality were sold as low as \$3.

Cotton.—A sale of 50 bales Mobile at 64 cts.

Molasses.—New Orleans is held at 18a20 cts. At auction this week 35 tierces Sugar House were sold at 20a20a cts.

Sugars.—The sales of the week, at auction and by private contract, are about 1000 hhns. Porto Rico, Cubas and New Orleans, at prices varying from \$3.00 to \$6.05. The particulars of the auction sales are on Wednesday 500 hhns. Porto Rico at \$4.10a\$5.50, on Thursday 250 hhns. Porto Rico at \$4a\$5.10, and 46 hhns. New Orleans at \$3.90a\$4. Sale of yellow Cuba box at \$5.75.

Tobacco.—The market this week has been dull and prices of common and inferior sorts of Maryland have declined to \$2.50a\$3.50. Good ripe lots, of which very few appear in market, readily bring \$5.50a\$6.50. Other qualities are dull and the market may be considered as having declined about 50 cts. per 100 lbs. The accounts from Europe are by no means encouraging. We now quote inferior and common Maryland at \$2.50a\$3.50, middling to good \$4a\$5.50; and good \$7a\$8; and fine \$8a\$12. Ohio is dull and in very limited demand at former rates, which we continue, although they must be considered as almost nominal, viz. common to middling \$3.50a\$4.50, good \$5a\$6, fine red and wrappery \$6.50a\$10, fine yellow \$7.50a\$10, and extra wrappery \$11a\$13. The inspections of the week comprise 1113 hhns. Maryland, 104 hhns. Ohio; and 38 hhns. Kentucky—total 1273 hhns.

Cattle.—The offerings of Beef Cattle at the drove yards to-day were small, consisting of 84 head just arrived, and 56 head which were left over from last week. The sales embraced all that were in market, and prices ranged from \$4.25 to \$6 per 100 lbs, as in quality. Several parcels of Live Hogs were also offered and a portion of them sold at \$3.50 per 100 lbs.

Flour.—There is but little inquiry for Howard street Flour, and but few transactions are now making. We quote the store price for good standard brands to-day at \$5.62a and the wagon price at \$5.50.

We hear of no transactions in City Mills. Holders ask \$6. A sale of 300 bbls. Susquehanna at \$5.87a on time with interest added. Sales of small parcels at \$5.75 cash.

Grain.—A sale of superior Harford County red Wheat to-day at \$1.31. We quote good to prime Md. reds at \$1.25a \$1.30. A sale of very prime Pennsylvania red was made to-day at \$1.34 for shipment, and another cargo of prime Pennsylvania at \$1.30. Sales to-day of white Corn at 55a56 cts. and of yellow at 58a60 cts. The last sales of Rye were at 65 cts.—It is now wanted and would bring an advance. We quote Oats at 40a42 cts. for Md. and 38a40 cts for Virginia.

Provisions.—In the absence of transactions to-day we merely repeat our last quotations as follows: viz. Mess Pork is held at \$8a\$8.50; No. 1 \$7a\$7.50; Prime at \$6a\$6.50 Mess Beef \$9.50, No. 1 at \$6.50 and Prime at \$4.50. The market is very heavily stocked with Bacon and prices differ according to the quality and condition of the article. We quote the range for Western assorted at 32a44 cents; Hams at 37a77 cents; Sides at 31a44 cents, and Shoulders at 3a34 cents. Baltimore cured Bacon ranges from 1 to 14 cents per lb. higher than Western. The last sale of No 1 Western Lard in kegs was at 5 58 cts. Holders now ask 6 cents. Considerable sales of mixed lots of No. 2 and No. 3 Western Butter were made at the close of the week at 8 cents. The market is now nearly cleared of the article.

At Philadelphia, on Saturday.—Prices of Flour and Meal are more firm, with an upward tendency, and receipts are small, most factors ask \$5.75 per bbl. for Flour, sales early in the week of Brandywine Corn Meal at \$14 for hhds and \$3 for bbls. Sales have been made of Penna. red Wheat at 127c per bushel, Southern yellow Corn is worth 59c, white do 54-

55c. Oats 40c. Prices continue for Provisions of all descriptions at extremely low rates. About 800 head Beef Cattle were at market, of which 200 went on to New York—prices ranged from \$44a\$64, according to quality. Hogs—400 offered, 170 left over, sales at \$4a\$4.4. Sheep—1130 head, sold at \$1.16a\$2.50 extra 4.25.

New York, Saturday, 2 P. M.—Flour is dull—still Genesee can only be sold as wanted for use at \$6.18a\$6.52, and now and then a lot is found at \$6.12. Corn is scarce, and would probably bring a little more than any sales yet made. Rye 62c measure, 62c wt. The sales of Cotton are going on better than yesterday, they are probably 800 bales this morning. Stocks continue rising; 44 was offered for Pennsylvania 5 per cent.

At Charleston, on the 20th instant, the market of Upland Cotton was quiet, owing to refusal of holders submit to lower terms. Demand for Rice limited, with few operations.

At Wilmington, N. C. on the 20th inst. Turpentine \$2.18, Tar \$1.08, no sales of lumber, Bacon 5a7c. Corn 55a56c.

At Richmond, on the 21st inst. Wheat was 100a110c for red and white, Corn 55a55c. Oats 40a45c—but little Grain in market. Demand for Flour very limited—sales at \$5.75 held at \$5.87a. Smithfield Bacon 51a61c. Western do. 43a5c. Lard 5a7c. Receipts of Tobacco light—lugs 24a21, leaf 3a-4a, qualities do. \$5a7a.

MURRAY'S CORN & COB CRUSHERS.

The subscriber, who exhibited the Corn and Cob Crusher and Grinder at the Agricultural meeting at Gwynestown, continues to build them, and has so improved them that persons who have not yet horse powers, can use them by hand power, with sufficient facility to supply the wants of small farms, and with one or two horse power can do more work, he believes, than any other machine for the same purpose that will require double the power. Having made a new set of patterns, and put such improvements as may have suggested themselves for the benefit of the machine, he has been obliged to increase the price to \$40, which includes an extra set of grinders.

He is also prepared to build portable HORSE POWERS of the very simplest and best construction, in every respect best suited for farmers; in place of using cast iron wheels, he uses leather belts, which the farmer can keep in repair himself. It is now well tested that belts are as well adapted to driving machinery as cast iron wheels.

Orders for the above machines can be left with Mr. SAMUEL SANDS, at the office of the American Farmer, or with the subscriber, WM. MURRAY, Powhatan Factory, Baltimore county.

MURRAY'S CORN & COB CRUSHERS.

The subscribers, inventors and patentees of this most excellent machine, offer for sale the right to manufacture for any state or county in the U. States. That this machine will be adopted, and become in general use in the corn-growing districts of our country there can be no doubt, as it is satisfactorily ascertained that more than one-third of the value of the produce is lost by the waste of the cob, which being crushed and ground with the grain, is more valuable for stock than corn fed by itself, and we guarantee that our Crusher will do more and better work with the same power than any other machine of the kind now in use, and invite all manufacturers to a fair trial.

We have appointed Mr. SAMUEL SANDS the sole Agent for the sale of rights, who will give every necessary information to those desirous of purchasing. All letters must be post paid.

NOTICE—There are several machinists infringing upon our patent CORN and COB CRUSHERS—we therefore forbid all persons from making, vending or using Corn Crushers having a robe or tubes for holding the ears of corn while they are broken, except such as have rights. JAS. & WM. MURRAY, Baltimore, Md.

JAS. MURRAY, Millwright, Pattern Maker & Machinist, York, near Light st. Baltimore, having good workmen, is prepared to execute orders in the above branches at the shortest notice—and warrants all mills planned and erected by him to operate well. Also manufactures a great variety of small mills for hand or horse power.

Corn Shellers, shelling from 30 to 300 bushels per hour, made to suit any power, price from \$15 to 75
Corn Crushers, grinding from 6 to 12 bush. per hour with one horse to two horse power, a superior article, price 35 to 40
Portable and stationary Horse Powers, price from 75 to 150
Turning Lathes, single and double, price from 15 to 75
Patent rights for sale for the Endless Carriage for gang Saw Mills, a good invention.

He has also on hand two small Steam Engines, 3 to 4 horse power. Any other machines built to order. All kinds of repairing done at the shortest notice.

Orders for Murray's Corn and Cob Crushers, forwarded to the subscriber, or Mr. Thomas Denny, Seedsman, agent for the subscriber, will be attended to. 16 7c

AGRICULTURAL IMPLEMENTS.

FARMERS' REPOSITORY IN PRATT STREET.

The subscriber has in store his usual extensive assortment of AGRICULTURAL IMPLEMENTS; his stock of Ploughs and Plough Castings on hand, is probably the most extensive of any in Baltimore, and will be sold at very reduced prices for cash. Also, my Horse-powers, Threshing Machines, Straw Cutters, and every implement in my store are offered to the public on the same reduced terms.—Wholesale dealers will find it to their advantage to give me a call. JONATHAN S. EASTMAN



MINGO CHIEF,

Will make his first season in Maryland, and be let to Mares at the Farm of Mr. J. P. E. STANLEY, 4 miles from Baltimore, on the Frederick road, at TEN DOLLARS for each Mare.

MINGO CHIEF is five years old this spring, near fifteen hands high, of a rich brown colour, perfectly formed for speed and action, goes all gaits naturally, and is very fast under the Saddle.

MINGO CHIEF was got by an Indian Horse, (grand sire of the famous trotting horse Bepko, and many other celebrated trotters and rackers;) that in his prime has racked his mile in 2-30, and although upwards of 20 years old, is still kept for Mares in Canada.

The dam of Mingo Chief was pure Canadian, and could trot a mile in 3 minutes without training. Mingo Chief was selected during the last summer in the neighborhood of Montreal, by a gentleman experienced in these matters, as being the best horse he could find to cross upon the stock of this part of the country for the production of Saddle Horses. The celebrated Morgan Breed of Vermont is said to be of the same cross.

Season to, commence 1st April and end 1st August.

ap 13

E. WEEKS, Manager.

LIME—LIME.

The subscriber is prepared to furnish any quantity of Oyster Shell or Stone Lime of a very superior quality at short notice at their Kilns at Spring Garden, near the foot of Eutaw street, Baltimore, and upon as good terms as can be had at any other establishment in the State.

He invites the attention of farmers and those interested in the use of the article, and would be pleased to communicate any information either verbally or by letter. The Kilns being situated immediately upon the water, vessels can be loaded very expeditiously. N. B. Wood received in payment at market price.

ap 22 3m

E. J. COOPER.

SEED-STORE & AGRICULTURAL WAREHOUSE.



The subscriber has for sale at the old stand, No. 176 MARKET STREET, PHILADELPHIA, the most extensive assortment of GARDEN, GRASS and FLOWER SEEDS, to be found in the U. States. The assortment comprises all the standard varieties; also many new and choice kinds, crop of 1841, and warranted of the best quality.

ALSO,

PROUTY & MEARS' Centre Draught self-sharpening PLOUGHS, the best and cheapest Ploughs to keep in repair now in use;

Also, PROUTY & MEARS' patent SUB-SOIL PLOUGH. This implement does the work to admiration, leaving the sub-soil in the best possible manner.

Also, Straw Cutters, Corn Shellers, Fan Mills, Vegetable Steamers, Cultivators, hill-side Ploughs, left hand Ploughs, and GARDEN TOOLS of all kinds—Agricultural BOOKS, &c. &c. for sale at wholesale and retail at the lowest prices, by

D. O. PROUTY,

No. 176 Market street, between 5th & 6th streets, Philadelphia.

mh 15 2m

FARMER'S REPOSITORY,
PRATT ST. BALTIMORE.

Constantly on hand a large assortment of PLOUGHS made of prime materials and good workmanship, and of most approved patterns; Davis' improved ploughs, of all sizes with cast and wrought shares; King's Connecticut ploughs, simplified and improved with cast and wrought shares, the Davis cast points, to suit the ploughs, likewise Evans reverse point or self-sharpening ploughs. All the above named ploughs are particularly adapted to the Eastern shore and lower counties of this State, as also the entire Southern country; also various other make of ploughs which have given great satisfaction to those who have used them; hill side and shovel ploughs; very superior plain and expanding Corn and Tobacco Cultivator, these can be recommended as being superior to any other article of the kind made in this State; four different patent Corn planters and seed droppers viz: Bachelder's, Osgood's, Old's and Robin's, and almost every other article in the agricultural line. A Foundry is attached to this establishment, and a large supply of plough castings are constantly kept on hand, which will be sold wholesale and retail as low as can be purchased in the City.

ON HAND—Horse Powers, Threshing Machines, Wheat Fans, &c. Also, a large supply of Cylindrical Straw Cutters, with wood and iron frames, from \$32 to \$110, and to meet the exigencies of the times, and to encourage cash sales, a liberal discount will be made.

ap 13

JONATHAN S. EASTMAN,
Sole Proprietor.

PROUTY & MEARS' \$100 PREMIUM PLOUGH.

Received at the office of the American Farmer, two sizes of the above celebrated plough, to which was awarded the prize of \$100 at the Massachusetts Fair. Farmers and others are invited to call and examine them. Orders received for them, as also for the Wiley and other ploughs, by

m 30

SAML. SANDS.

600 BARRELS OF POUDETTE.

For sale at the office of the NEW-YORK POUDETTE company, 120 Nassau street, New York—Price two dollars per barrel, containing FOUR bushels heaped measure each, delivered on board of any vessel in this city.

Present prices of shares in this company, one hundred and ten dollars each entitling the holder to one hundred bushels of poudetto annually, during the continuance of the charter, 17 years from next March; which at present prices will be equivalent to a return of the capital and over five per cent annual interest every three years. Those who took shares in the winter of 1837—8 have received three hundred bushels on each share; and are entitled to seventeen hundred more. Those who desire shares will do well to apply soon, as they will not be sold at that price after 1st May next—address the agent,

D. K. MINOR, 120 Nassau St. up stairs.

New York, January 16th 1842.—Feb. 2

7t

BADEN CORN.

The subscriber has received from Mr. Baden a lot of this celebrated CORN—and those wishing to make a trial of it can obtain it lots of a peck, bushel or larger quantity. Apply to

S. SANDS.

Who has for sale two beautiful DEVON HEIFERS, nearly two years old, deliverable in this city for \$50 each. Also a very handsome Devon BULL: one year this spring, price \$50, and a HEIFER of same age and blood, price \$40.

mh 15

Also a few bbls. POUDETTE.

FRESH GARDEN SEED.

THOMAS DENNY Seedsman, has received his fresh supply of GARDEN SEED, the growth of 1841, and invites his friends and the Public to give him a call.

He has also Field Seed of various kinds, and best suited for this climate and soil, selected with care.



ORDERS for APPLE, PEACH and other Fruit and Ornamental trees will be thankfully received, and duly executed with promptness and dispatch for cash, having made arrangements with an old established and well known Nurseryman, in whom he feels confident the public cannot be deceived as to the particular kinds ordered. Also, Shrubs, bulbs, Hot-house Plants, Dahlias, Evergreens &c. &c. in their greatest varieties furnished to order at regular prices, on commission.

He has also the agency for selling MURRAY'S Corn and Cob Crushers at the regular manufacturing prices. This is a first-rate article, having been proved by many Eastern Shore Farmers and others to be a very efficient Machine, uniting strength and simplicity in its structure.—It operates by hand, or can be adapted to any other power to suit all classes of farmers.

THOS. DENNY,

Corner of Pratt & Grant sts.

Fe23 7t—A2aw4tif 37-Up-stairs over Tyson & Brother's

FRESH GARDEN SEEDS.

ROBERT SINCLAIR, JR. & CO. No. 60 LIGHT ST. have just received, (via New York,) by the ships Glad-lator and Quebec, and from their SEED GARDENS, near this city, a superb assortment of GARDEN AND EUROPEAN FIELD SEEDS, among which are Knight's extra early dwarf; Vanoe Pontefract early York, and Sinclair's early flat Dutch or Landreth's improved Cabbage Seed; all new and superior sorts. Seventy-five bushels Sinclair's extra early Peas.

Knight's and Groom's marrowfat, egg and several other new varieties of Peas.

600 lbs. scarlet short top and turnip Radish Seed.

Half long and turnip Beet; color very dark and finely shaped.

Early cup Parsnip; Broccoli; Cauliflower.

Lettuce, Large red and yellow Globe Mangel Wurzel; the latter a new variety.

Dwarf and pole Beans; Lettuce, Cucumber, Squash;

Giant and common Celery; Egg Plant, Early Corn, Melons, Onion, Savoy Spinach, Tomato, Turnip, ash leaved Kidney, early frame and London round Potatoes; Lucerne, Vetches, &c. &c.

In store—American Field Seed of all sorts; Garden and Farming Tools, books on agriculture and management of stock, Plough and Machine Castings, Ploughs and Agricultural Machinery. A large and general assortment.

TREES AND PLANTS; raised at the Clairmont Nurseries.

MARTINEAU'S IRON HORSE-POWER

The above cut represents this horse-power, for which the subscriber is proprietor of the patent-right for Maryland, Delaware, and the Eastern Shore of Virginia; and he would most respectfully urge upon those wishing to obtain a horse power, to examine this before purchasing elsewhere; for beauty, compactness and durability it has never been surpassed.

Threshing Machines, Wheat Fans, Cultivators, Harrows and the common hand Corn Sheller constantly on hand, and for sale at the lowest prices.

Agricultural Implements of any peculiar model made to order at the shortest notice.

Castings for all kinds of ploughs, constantly on hand by the pound or ton. A liberal discount will be made to country merchants who purchase to sell again.

Mr. Hussey manufactures his reaping machines at this establishment.

R. B. CHENOWETH,
corner of Front & Ploughman sts. near Baltimore st. Bridge, or No 20, Pratt street.

Baltimore, mar 31, 1841

GARDEN SEED.

J. S. EASTMAN (Pratt street) has received his SEEDS. My whose stock of Seeds now on hand from Mr. Landreth are of last year's growth, and can be depended upon as superior Seeds and true to their kind.—Also, in store, Orchards, Grass, and Herd's Seed of good quality and at low prices.

feb. 2

THE LIME KILNS.

The subscriber, in order to meet the increasing demand for Lime for agricultural purposes, has established Kilns for burning the same on the Rock Point farm, belonging to the Messrs. Lancaster, in Charles county, Md. where he is ready to supply all demands for this section of the state, and the waters of the Potomac, on accommodating terms. Orders directed to him at Milton Hill Post Office, Md. will meet prompt attention.

do 7 6m*

WM. M. DOWNING.

BERKSHIRE PIGS.

The subscriber will continue to receive orders for their spring litters of young Berkshire Pigs, from their valuable stock of breeders, (for particulars of which, see their advertisement in No. 34 or 37, Vol. 2 of this paper.) Price at their piggery \$20 per pair; cooped and delivered in, or shipped at the port of Baltimore, \$21 per pair. All orders post paid will meet with prompt attention—address,

T. T. & E. GORSUCH.

Hereford, Baltimore Co. Md.

mh 23

REAPING MACHINES, CORN AND COB CRUSHERS,
CORN SHELLERS, &c. WARRANTED.

The Reaping Machine stands alone, increasing in reputation from year to year, saving its first cost in one large crop in the waste alone, while the attempts of others, to construct machines for a similar purpose, are well known to be total failures. Those who wish to procure Machines for the ensuing harvest, are requested to make early application to the subscriber, who has greatly improved them since last year. Corn and Cob Crushers, warranted superior to all others, also, Corn Shellers and Huskers constantly on hand at reduced prices.

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OBED HUSSEY.

TO FARMERS.

The subscriber has for sale at his Plaster and Bone Mill on Hughes street, south side of the Basin, GROUND PLASTER, GROUND BONES, OYSTER SHELL & STONE LIME, and LEACHED ASHES, all of the best quality for agricultural purposes, and at prices to suit the times.

Vessels loading at his wharf with any of the above articles, will not be subject to charges for dockage or wharfage.

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WM. TREGO, Baltimore.

AGRICULTURAL MACHINERY,

Manufactured and for sale by A. G. & N. U. MOTT South east corner of Ensor and Forest sts. near the Bel-air market, Old Town, Baltimore.

Being the only agents for this state, are still manufacturing WILEY'S PATENT DOUBLE POINTED COMPOSITION CAPT PLOUGH, which was so highly approved of at the recent Fair at Elliott's Mills, and to which was awarded the palm of excellence at the Govanstown meeting over the \$100 Premium Plough, Property of Philadelphia, and Davis' of Baltimore, and which took the premium for several years at the Chester Co. Pa. fair—This plough is so constructed as to turn either end of the point when one wears dull—it is made of composition metal, warranted to stand stony or rocky land as well as steel wrought shares—in the wear of the mould board there is a piece of casting screwed on; by renewing this piece of metal, at the small expense of 25 or 50 cts. the mould board or plough will last as long as a half dozen of the ordinary ploughs. They are the most economical plough in use—We are told by numbers of the most eminent farmers in the state that they save the expense of \$10 a year in each plough. Every farmer who has an eye to his own interest will do well by calling and examining for himself. We always keep on hand a supply of Ploughs and composition Castings—Price of a 1-horse Plough \$5; for 2 or more horses, \$10.

We also make to order other Ploughs of various kinds.

MOTT'S IMPROVED LARGE WHEAT FAN, which was so highly approved of at the recent Fair at Elliott's Mills and at Govanstown, as good an article as there is in this country—prices from 22 to \$25.

A STRAW, HAY AND STALK CUTTER, With 20 knives attached, will cut 3 tons of straw per day by horse power, and one half by manual power. Price \$35.

A CORN SHELLER that will shell as fast as two men will throw in, and leave scarcely a grain on the cob nor break a cob, by manual power; price \$17.

CULTIVATORS with patent teeth, one of the best articles for the purpose in use, for cotton, corn and tobacco price \$4, extra set of teeth 1.

HARROWS of 3 kinds, from 7 to \$12.

GRAIN CRADLES of the best kind, \$3.75.

HARVEST TOOLS, &c.

Thankful for past favors we shall endeavor to merit a continuance of the same.

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MOTT'S AGRICULTURAL FURNACE.

The subscriber respectfully informs his customers, and the public generally, that he has on hand, and intends constantly to keep, a supply of MOTT'S JUSTLY CELEBRATED AGRICULTURAL FURNACES, for cooking vegetables and grain for stock of all kinds. They vary in size from HALF a barrel to FOUR barrels, and are better adapted to the purpose for which they are intended than any other yet invented; obtained the premium of the American Institute, and have given satisfaction to every gentleman by whom they have been purchased. Col. C. N. BEMMINT, the distinguished agriculturist near Albany, New York, who has had one in use for some time, in a letter to the editor of the Cultivator, says,

"The one I purchased last fall, I continued to use during the winter, and have found no reason to alter the opinion then expressed; but on the contrary, I am more confirmed, and do not hesitate, without qualification, to recommend it, with the 'ate improvements, as superior to any thing, for the purpose intended, which I have ever used, or which has fallen under my observation."

"Mr. Mott has lately sent me one of the capacity of two barrels, containing the improvements, which consist in casting 'points of attachment' or gudgeons, on the rim or sides of the kettle, 'so that with a crane or level' it may be raised out of the casing and the contents emptied out, and to facilitate which, a loop or eye is cast on the bottom of the kettle so that it can be done without burning the fingers. The flange also, has been extended beyond the edge of the casing, so that if water boil over it will not run down the flues and put out the fire."

These furnaces and boilers are portable and may be set up in any out-house, being from their compactness and construction perfectly safe. The furnaces are made of cast iron and peculiarly calculated to economize fuel.

The following are the prices for one of the capacity of a half barrel

do	do	do	One barrel	\$12.50
do	do	do	One and a half	20.00
do	do	do	Two barrels	28.00
do	do	do	Three do	38.00
do	do	do	Four do	48.00

A. WILLIAMS, Corner of Light & Pratt St. Balt. Md.

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